Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: Montana H_2O, LLC
1411 22nd Ave NW
Sidney, MT 59270

2. *Type of action*: Application for Beneficial Water Use Permit No. 42M 30062767

3. *Water source name*: Groundwater and Yellowstone River

4. *Location affected by project*: SESENW, Section 22, T23N, R59E, Richland County

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits*: This project is to divert groundwater for the purpose of water marketing. The application is for 363 GPM up to 585 AF of water annually from January 1 thru December 31. The point of diversion and the place of use are located in the SE¼SE¼NW¼ Sec 22 T23N R59E, Richland County. The service area is generally located in all of Richland County. The water will primarily be marketed to the oil industry for the purpose of formation fracturing. The water depot will have four load outs that can simultaneously fill water tankers.

   The DNRC shall issue a water use permit if the applicant proves the criteria in 85-2-311, MCA are met.

6. *Agencies consulted during preparation of the Environmental Assessment: (include agencies with overlapping jurisdiction)*

   Montana Department of Environmental Quality – Web site
   Montana Department of Fish, Wildlife & Parks
   National Wetlands Inventory
   Montana Natural Heritage Program

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: The applicant has shown that the zone of influence of the well intersects the Yellowstone River. The reach of the Yellowstone River that is included in the zone of influence is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife & Parks. The DFWP has a water reservation on this portion of the Yellowstone River that ranges from 2,670 cfs in August to 25,140 cfs in June to maintain instream flows. After 4 years of pumping the depletion to the Yellowstone River will equal 80% of the pumping rate or 0.65 CFS. Eventually, the depletion rate will equal the pumping rate.

This reach of the stream is not identified as being dewatered and a diversion rate of 363 GPM will likely not have a noticeable effect on the Yellowstone River.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: The lower Yellowstone River is listed on the 2010 Montana 303(d) list as fully supporting agriculture, drinking water industrial uses and primary contact recreation and partially supporting aquatic life and warm water fishery. Probable causes of impairment are alterations in stream-side or littoral vegetative covers, fish passage barriers and chemical and mineral levels. Probable sources are the impacts from irrigation crop productions, rangeland grazing, streambank modification/destabilization, hydro-structure flow regulation/modification and natural or unknown sources of chemical or mineral properties.

This project will not likely have a significant or long term impact water quality.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: The well was drilled in September of 2011 and aquifer test was started on October 31, 2011 and completed on October 21, 2011. With the information gain from the aquifer test, the Applicant used the Theis model to determine the zone of influence is 3.8 miles after pumping for one year at a rate of 363 GPM. Using AQTESOLV Pro analytical software, the project drawn down was modeled for several hypothetical wells for distances ranging from 0.0.25 miles to 8.0 miles after a pumping rate of 363 GPM for 5 years. Projected drawdown after five years of pumping ranged from 3.0 ft at a distance of 0.25 miles to 0.015 ft at a distance of 8.0 miles. The Applicant identified a connection between the source aquifer and the Yellowstone River. A Department Hydrologist used the Colorado Model to determine that after four years of year round pumping, the depletion to the Yellowstone River will be 80% of the pumping rate or 0.65 CFS. Eventually, the depletion rate will equal the pumping rate. The Applicant provided a legal availability analysis on the Yellowstone River. The requested flow rate of 363 GPM is .0004% of the lowest legally available flow and the requested volume of 585 is .005% of the lowest legally available volume.

The rate of diversion will not likely have an impact on the groundwater or the Yellowstone River quality.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: Water will be diverted from the ground via a 6 inch well. The well is constructed of a 6 inch welded steel casing from 2 feet above ground to 29 feet below ground surface and a 6 inch schedule 40 PVC casing from 0 feet to 50 feet below ground surface. The well is screen with a 6 inch continuous 20 slot PVC screen in a coarse sand and gravel from 50 feet to 70 feet below ground surface. The well is equipped with a 455 GPM, 20 HP Berkley pump end and 20 HP, 460 volt, 3-phase Franklin motor. The well pumps into a 4 inch galvanized main line. Water from the main line will be diverted into 4, 4-inch feeder lines that each supply a 16,800 gallon above-ground fiberglass storage tank. Total storage is equal to 67,200 gallons. The storage tanks will be plumbed so that they operate as one tank. One tank will be equipped with a float switch to control the well. The pump will automatically turn on and shut off when the water level reaches a predetermine level. Each tank will be equipped with a 4 inch galvanized pipe and check valves that will allow water truck drivers to load water into their tankers. Each load out may be metered for billing purposes. The well and above ground water lines will be sheltered by a metal shed with a door access for maintenance purposes. The main line will be equipped with a totalizing meter that will measure flow rate and total volume diverted.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: According to the Montana Natural Heritage Program website, The Bureau of Land Management, (BLM), lists the Townsend's Big Eared Bat, Black-tailed Prairie Dog, Spiny Softshell, Blue Sucker, Sturgeon Chub, Paddlefish, and Sauger as sensitive. The Whooping Crane and the Pallid Sturgeon are listed by BLM as Special Status. The US Forest Service, (USFS), lists the Townsend's Big-eared Bat and the Black-tailed Prairie Dog as sensitive. Both the US Forest Service and the US Fish & Wildlife Service list the Whooping Crane and the Pallid Sturgeon as Endangered. No federally-listed threatened or endangered plant species exist within the Project area.

The well and storage and distribution facilities are located adjacent to a regularly traveled county road and a historically irrigated field. It is unlikely that any of the above listed wildlife would be

The Project will likely have no effect on endangered and threatened species.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: There are no wetlands claimed in the project area.

The Project will likely have no significant impact on wetlands outside.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: This project does not involve ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: Water diverted for this project will not impact soils. This water is for formation fracturing.

The Project will likely have no impacts on soils in the project area.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: This project will cause minor disturbances to the area. With the additional thru-truck traffic, the project area may see an increase in the introduction of noxious weeds.

The Applicant will be responsible for monitoring and controlling the establishment or spread of noxious weeds.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: The additional traffic may increase dust disturbance in the area, however, the access to and from the Depot are paved. The Applicant will be responsible for the control of fugitive dust.

The Project will likely have no effects to air quality.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: Not applicable; this project is not located on State Trust or Federal lands.

The Project will likely have no impact on historical, cultural or archeological sites.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No additional impacts on other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in this area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: The project is located in a rural area that has historically been used for agricultural purposes and will not have an impact on recreation or wilderness activities

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: This project will have no impact on human health.

PRIVATE PROPERTY - *Assess whether there is any government regulatory impacts on private property rights.*
*Yes___ No_**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: There are no additional government regulatory impacts on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? No Significant Impact

(*b) Local and state tax base and tax revenues?* No Significant Impact

(c) Existing land uses? No Significant Impact

(*d) Quantity and distribution of employment?* No Significant Impact

(e) Distribution and density of population and housing? No Significant Impact

(f) Demands for government services? No Significant Impact

(g) Industrial and commercial activity? No Significant Impact

(h) Utilities? No Significant Impact

(i) Transportation? No Significant Impact

(j) Safety? No Significant Impact

(k) Other appropriate social and economic circumstances? No Significant Impact

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: This assessment does not indicate possible secondary impacts on the physical environment and/or the local human population.

Cumulative Impacts: This assessment does not indicate possible cumulative impacts on the physical environment and/or the local human population.

3. *Describe any mitigation/stipulation measures:* N/A

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:* An alternative analysis of the project identified a no action alternative to the construction of the Depot project. This alternative would not have any direct impacts that are typically associated with construction and operation of the Depot. The no-action alternative would not allow the Applicant to meet the purpose of and need for the project.

PART III. Conclusion

1. Preferred Alternative: Construct the Montana H_2O Water Depot is the preferred alternative.

2 Comments and Responses

3. *Finding:*
Based on the significance criteria evaluated in this EA, is an EIS required? NO

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

No significant impacts have been identified; therefore an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Ann L. Kulczyk
Title: Water Resource Specialist
Date: June 18, 2012